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CHANZON 100F5T-YT-WH-GR

CHANZON 5mm Green LED Diode Lights User Manual

Model: 100F5T-YT-WH-GR | Brand: CHANZON

1. Introduction

Thank you for choosing CHANZON 5mm Green LED Diode Lights. This manual provides essential information for the safe and effective use of your new electronic components. These high-brightness LEDs are ideal for a wide range of applications, from DIY PCB circuits and Arduino projects to science experiments and indicator lights.
Please read this manual thoroughly before use and retain it for future reference.

2. Safety Information

Always observe the following safety precautions when working with electronic components:

- Ensure power is disconnected before handling or installing LEDs.
- Do not exceed the specified forward voltage (DC 3V - 3.2V) or current (20mA) to prevent damage to the LED.
- Observe correct polarity: the longer leg is the Anode (+) and the shorter leg is the Cathode (-). Incorrect polarity will prevent the LED from lighting and may cause damage.
- Avoid direct eye exposure to the illuminated LED, as the bright light can be intense.
- Keep LEDs and other small electronic components out of reach of children.
- Handle components with care to avoid bending or breaking the leads.

3. Product Overview

The CHANZON 5mm Green LED Diode Lights are clear, round, transparent light-emitting diodes designed for various electronic applications. Each package contains 100 pieces of these high-quality LEDs.

Image: Packaging of CHANZON 5mm Green LED Diode Lights, showing a bag of 100 LEDs, a single unlit LED, and a glowing green LED.

Image: A detailed close-up of a single 5mm clear round transparent LED diode, highlighting its two leads.

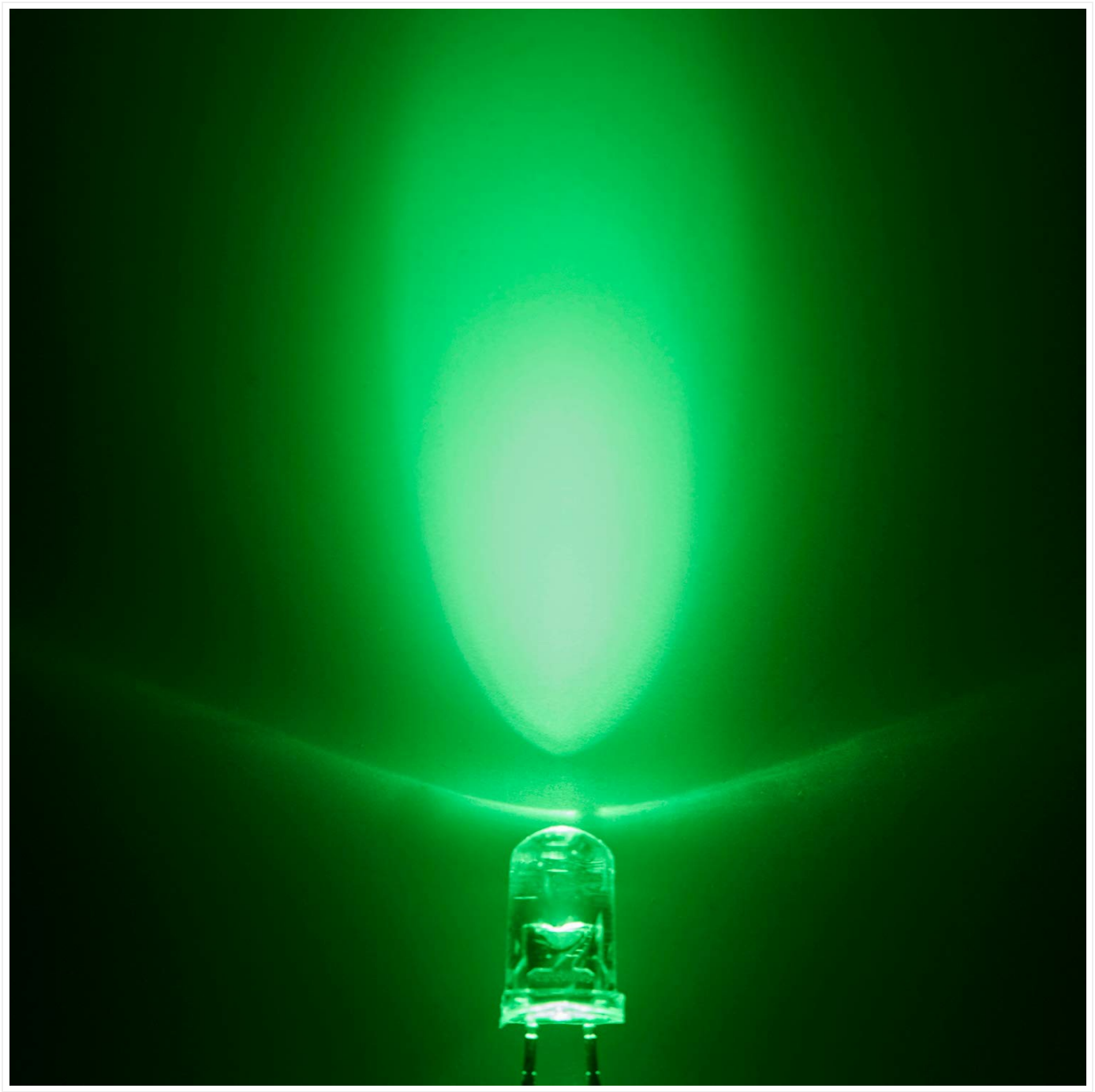

Image: A single 5mm green LED diode illuminated, showcasing its bright green light output.

Image: A pile of multiple CHANZON 5mm green LED diodes, demonstrating the quantity included in the package.

These LEDs are characterized by their high luminous intensity and low power consumption, making them suitable for various electronic projects.

Product Features:

- **Color:** Green
- **Wavelength:** 515-520nm
- **Luminous Intensity:** 1500-1800 mcd (High Brightness)
- **Viewing Angle:** 30 Degrees
- **Lens Type:** Clear Transparent Round
- **Leads:** Through Hole DIP 2-pins

Visual Demonstration:

Your browser does not support the video tag.

Video: This video demonstrates various CHANZON LED diode lights, including 3mm and 5mm sizes, and both clear transparent and diffused round lens types, showcasing their appearance and how they look when illuminated on a breadboard.

4. Specifications

Detailed technical specifications for the CHANZON 5mm Green LED Diode Lights:

Parameter	Value
Color	Green
Wavelength	515-520nm
Luminous Intensity	1500-1800 mcd
Forward Voltage (Vf)	DC 3V - 3.2V
Forward Current (If)	20 mA
Viewing Angle	30 Degrees
Lens Type	Clear Round Transparent
Lead Type	Through Hole DIP 2-pins
Diameter	5mm (F5)
Operating Temperature	-25°C to +80°C (Typical)
Storage Temperature	-40°C to +100°C (Typical)
Product Dimensions	6.3 x 5.51 x 0.71 inches (package)
Item Weight	0.63 ounces (package)

5mm Clear Lens (IF=20mA)	Wavelength	Luminous intensity	Forward voltage	Viewing Angle
White	6000-9000K	12000-14000mcd	3.0-3.2V	30°
Red	620-625nm	2000-3000mcd	2.0-2.2V	30°
Green	515-525nm	15000-18000mcd	3.0-3.2V	30°
Blue	450-455nm	7000-8000mcd	3.0-3.2V	30°
Yellow	588-592nm	1500-2000mcd	2.0-2.2V	30°
Warm White	2800-3000K	14000-16000mcd	3.0-3.2V	30°
Yellow-green	570-575nm	500-700mcd	2.0-2.2V	30°
Orange	602-610nm	1500-2000mcd	2.0-2.2V	30°
Purple (UV)	395-400nm	300-400mcd	3.0-3.4V	30°
Pink	/	7000-8000mcd	3.0-3.2V	30°

Image: A table detailing specifications for 5mm clear lens LEDs across different colors, including wavelength, luminous intensity, forward voltage, and viewing angle.

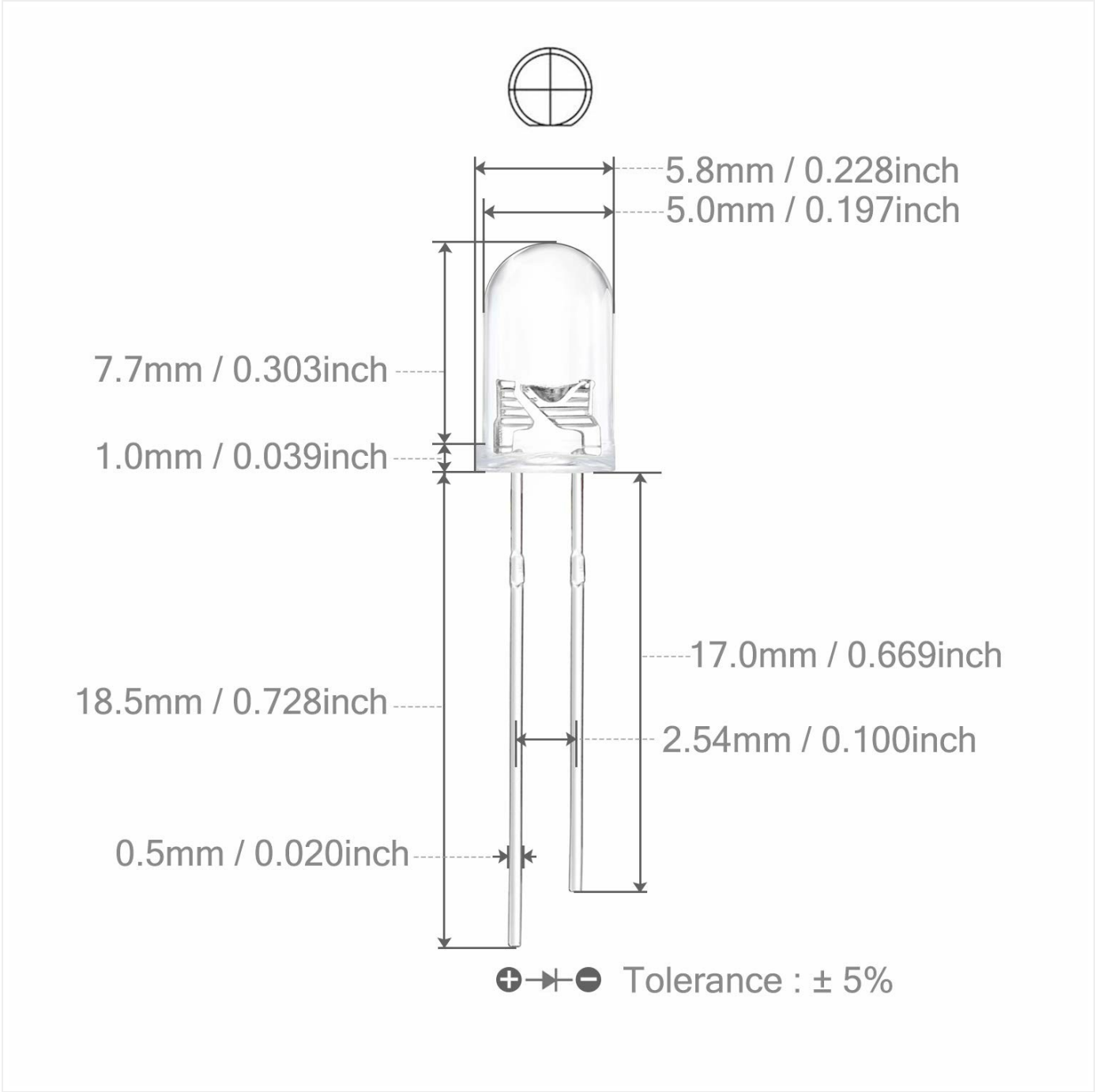

Image: A technical drawing illustrating the precise dimensions of a 5mm LED diode, including lens diameter, lead length, and spacing.

5. Setup and Installation

Proper setup is crucial for the functionality and longevity of your LEDs. Follow these steps for installation:

1. **Identify Polarity:** LEDs are diodes and are polarity-sensitive. The longer lead is the Anode (+) and the shorter lead is the Cathode (-).
2. **Current Limiting Resistor:** Always use a current-limiting resistor in series with the LED to prevent overcurrent and damage. The resistor value depends on your power supply voltage and the LED's forward voltage/current. A common calculation is R = (Vs - Vf) / If, where Vs is supply voltage, Vf is LED forward voltage (approx. 3.2V for green), and If is LED forward current (0.02A).
3. **Connection:** Connect the Anode (+) of the LED to the positive terminal of your power supply (or through the resistor to the positive supply). Connect the Cathode (-) of the LED to the negative (ground) terminal of your power supply.
4. **Mounting:** Insert the LED leads into a breadboard, PCB, or other suitable mounting solution. Ensure leads are not

short-circuited.

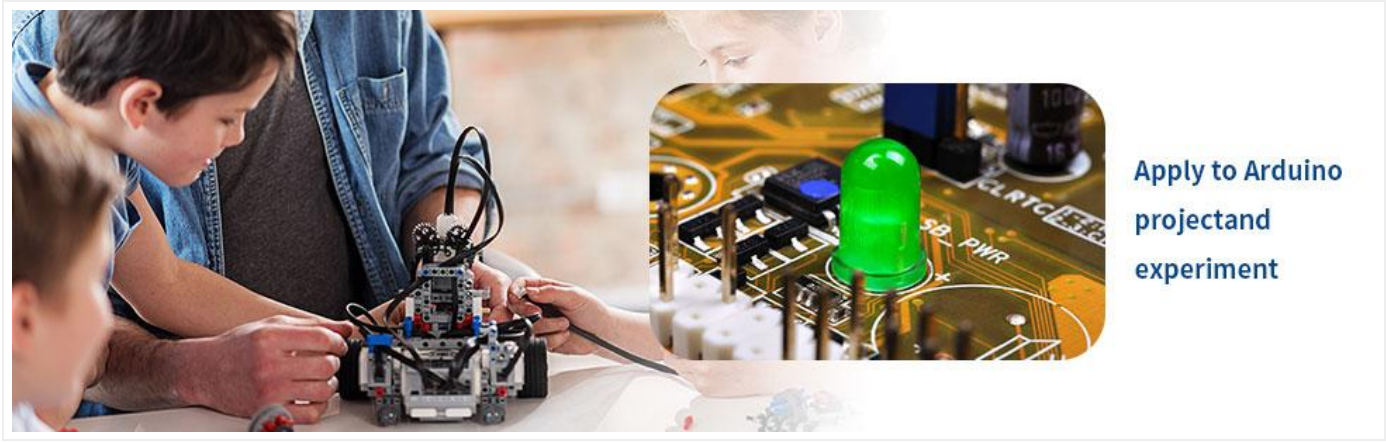

Image: An illustration of LEDs integrated into an Arduino project and experiment, demonstrating their application in circuit building.

6. Operating Instructions

Once properly installed with a current-limiting resistor, apply power to your circuit. The LED should illuminate brightly. If it does not, refer to the Troubleshooting section.

Typical Applications:

- DIY PCB Circuits
- Arduino and Raspberry Pi Projects
- Hobby Electronics
- Science Experiments
- Indicator Lights for Electronic Devices
- Educational Kits

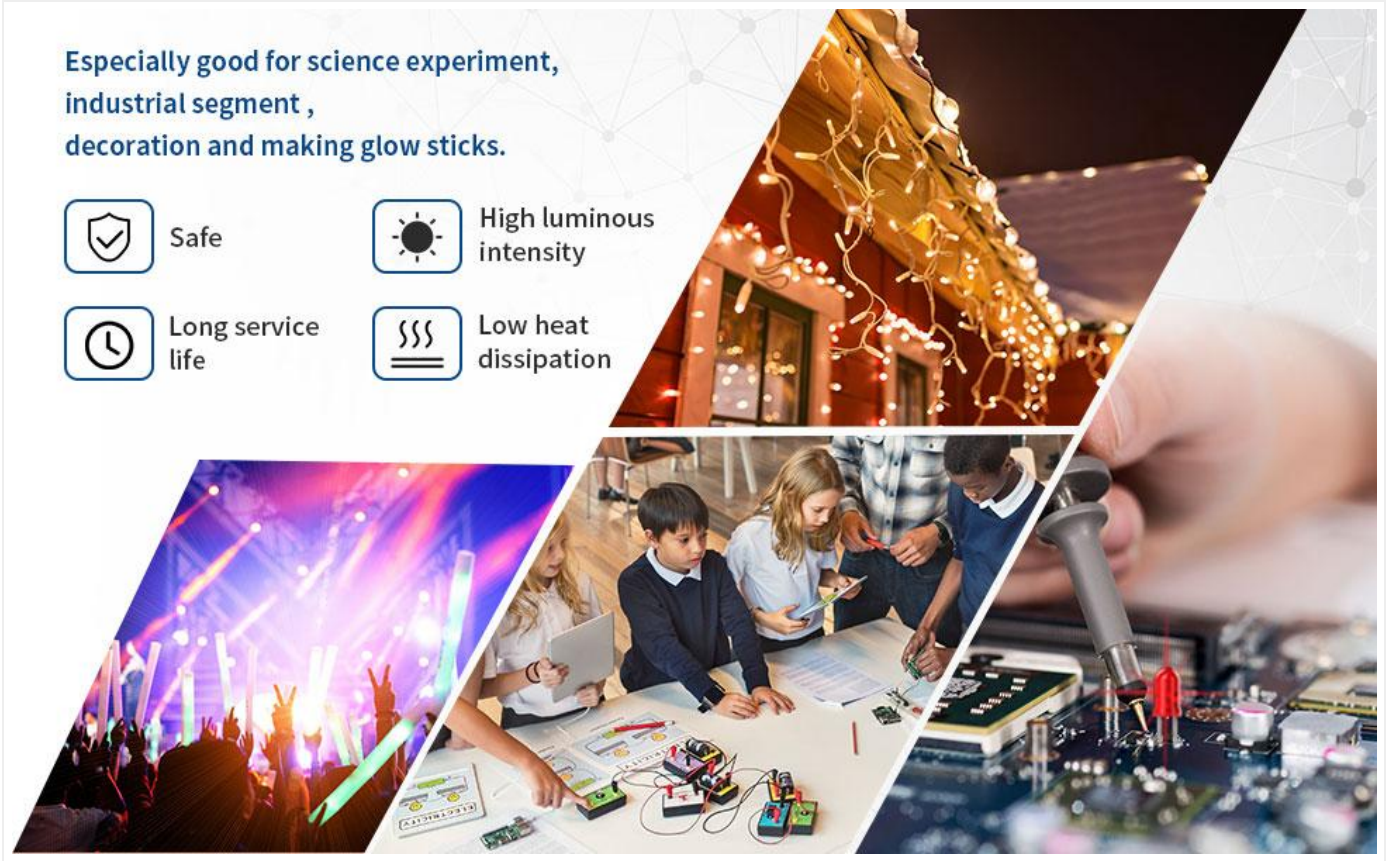

Image: A collage illustrating diverse applications of LEDs, including science experiments, industrial uses, and decorative lighting, highlighting their versatility.

7. Maintenance

CHANZON LEDs are designed for long working life and require minimal maintenance. Follow these guidelines:

- **Cleaning:** If necessary, gently wipe the LED lens with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store unused LEDs in their original packaging or in an anti-static bag in a cool, dry place to protect them from moisture and physical damage.
- **Handling:** Always handle LEDs by their body, not by the leads, to prevent bending or breaking.

8. Troubleshooting

If your LED is not functioning as expected, consider the following common issues and solutions:

Problem	Possible Cause	Solution
LED does not light up	Incorrect polarity	Reverse the LED. Ensure the longer leg (Anode +) is connected to the positive supply and the shorter leg (Cathode -) to ground.
LED does not light up	No power or insufficient voltage	Check power supply connections and ensure voltage is within the specified range (3V-3.2V).
LED does not light up	Missing or incorrect current-limiting resistor	Ensure a suitable current-limiting resistor is in series with the LED. Calculate the correct value based on your supply voltage.
LED is dim	Insufficient current or voltage	Verify your power supply and resistor calculation. The LED requires 20mA for optimal brightness.
LED burns out quickly	Overcurrent (no resistor or too low resistance)	Always use a current-limiting resistor. Ensure its value is correctly calculated to limit current to 20mA.
Physical damage to leads	Rough handling	Handle LEDs carefully by the body. Avoid excessive bending or stress on the leads.

9. What's in the Box

Your package of CHANZON 5mm Green LED Diode Lights includes:

- 100 x 5mm Green LED Diodes (Clear Round Transparent)

10. Warranty and Support

CHANZON products are manufactured to high-quality standards. For any questions, technical assistance, or support regarding your CHANZON 5mm Green LED Diode Lights, please contact CHANZON customer service through the retailer's platform where you made your purchase. Please provide your order details and a clear description of the issue for prompt assistance.
For more information about CHANZON products, visit the officialCHANZON Store on Amazon.

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